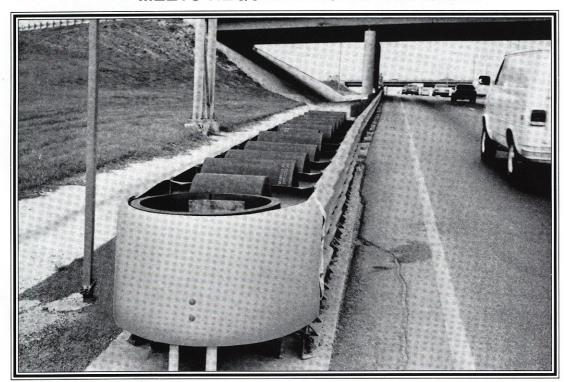
## THE LIVA SYSTEM

A highly reusable, low maintenance solution for your high-frequency impact areas

- REUSABLE COMPONENTS
  - QUICKLY AND EASILY REFURBISHED AND RESTORED
    - VERY LOW MAINTENANCE COSTS
      - PROVEN IMPACT PERFORMANCE
        - MEETS REQUIRED NCHRP 230 TESTS



The LMA System (Low Maintenance Attenuator) is the ideal crash cushion for narrow hazards in high-frequency impact areas. It is designed, constructed and tested to conform with National Cooperative Highway Research Program Report 230 (NCHRP 230).

The LMA System is composed of specially formulated elastomeric cylinders surrounded by a framework of triple-corrugated steel diaphragms and guardrails (thrie-beam). When impacted head-on, the elastomeric cylinders compress, absorbing the energy of the impact, while the overlapping steel guardrail side-panels telescope, allowing the system to move rearward. Lateral movement from side angle impacts is controlled by restraining chains and a restraining cable.

One unique benefit of the LMA System is the low maintenance cost due to the highly reusable components. For most design impacts, the key structural components and the energy absorbing materials are not expended. The unit can be placed back into service quickly and easily.

## ADVANTAGES AND APPLICATIONS



The LMA System offers a combination of advantages: the strength and anti-climb characteristics of thrie-beam guardrail and the low maintenance aspect of reusable elastomeric energy absorbing cylinders



Each system includes 12 modular bays and a flexible, reusable nose section

The LMA System safely stops errant vehicles in the 1800-4500 lb weight range traveling up to 60 mph under conditions set forth in NCHRP 230 guidelines for testing and evaluating crash cushions



Most head-on and side-angle hits (as prescribed in NCHRP 230) result in no damage to



Suitable for narrow hazard protection in high traffic volume areas that receive frequent impacts



Durable, reusable elastomeric cylinders provide the lowest life-cycle cost of any



Refurbishment after impact is safer since work crews can get in and out quickly with minimum disruption of traffic lanes



The LMA System is eligible for 100% Federal funding

## SYSTEM CHARACTERISTICS

LENGTH:

WIDTH AT THE BACKUP:

WEIGHT:

**DEBRIS SCATTER:** 

**REPAIR TIME:** 

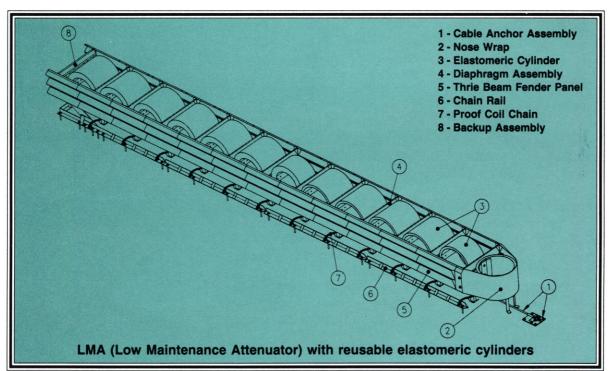
33'-4" (10.1 m)

3'-0" (91 cm)

7200 lbs (3265 Kg)

**Virtually None** 

Under an hour for 2-person crew





EMS, INC.